

ROADWAY DESIGN

- _____ Rural Roadway Design
- _____ Urban Roadway Design
- _____ Interchange Design
- _____ (submittal should include sample (plans) showing
MicroStation & GEOPAK capabilities)
- _____ Roadway Lighting

SURVEYING

- _____ GPS (sample should include equipment list and a sample of
static network documentation & RTK site calibration)
- _____ SUE (sample should include equipment list)
- _____ Route Location Surveys (sample should include equipment list)
- _____ Vangarde
- _____ High Density Laser Scanner
(sample should include equipment list)
- _____ Hydrographic Surveys
(sample should include equipment list)

HYDRAULICS

- _____ Hydraulic Design

BRIDGE DESIGN

- _____ Bridges - Spans under 200'
- _____ Bridges - Spans over 200'
The minimum personnel criteria for in-state status requires at least two permanent engineers & a technician. Both engineers must have substantial bridge design experience & at least one of the engineers must be a Registered Professional Engineer in NC.

STORMWATER PROGRAM

- _____ Planning, design, & construction of stormwater BMPs
- _____ Water quality monitoring
- _____ Technical water quality assessments
- _____ Stakeholder facilitation
- _____ IT development to support information management,
analysis, monitoring, and reporting
- _____ Watershed analysis & modeling
- _____ Public participation & outreach
- _____ Regulatory analysis & planning
- _____ Development of design standards, manuals, &
performance criteria for program management

OTHER

- _____ Visualization (submittal should include sample showing visualization
capabilities.)

Highway Design Branch continued on next page...

GEOTECHNICAL ENGINEERING DISCIPLINES

GEOTECHNICAL ENGINEERING SERVICES

- _____ Roadway Foundation Investigation & Design
- _____ Structure Foundation Investigation & Design
- _____ Retaining Wall Investigation & Design
- _____ Pavement Design Investigation

GEOENVIRONMENTAL SERVICES

- _____ Hazardous Waste Site Analysis
- _____ Underground Storage Tank Analysis

GEOPHYSICAL SERVICES

- _____ Geophysical Services

GEOTECHNICAL SPECIALTY SERVICES

- _____ Ground Improvement Design
- _____ Cantilever Retaining Wall Design
- _____ Anchored Retaining Wall Design
- _____ MSE Retaining Wall Design
- _____ Dam Investigation, Evaluation & Design
- _____ Landslide Investigation, Evaluation & Mitigation Design
- _____ Rock Slope Investigation, Evaluation & Design
- _____ Rock Blasting Evaluation & Design

Contact Person: Judy Slywka - 919/250-4001
jslywka@ncdot.gov

CONSTRUCTION

_____ Roadway Construction Engineering &
 Inspection
_____ Structures Construction Engineering &
 Inspection
_____ Intelligent Transportation Systems
 (ITS) Inspection
_____ Signal Systems Inspection

_____ Construction Contract Claim Analysis
_____ Critical Path Method (CPM) Scheduling

Other: _____

Contact Person: Mickey Biedell, PE - 919/733-7174
mbiedell@ncdot.gov

ITS & SIGNALS

- _____ Signal Design
- _____ Signal System Design
- _____ Signal System Timing Development & Implementation
- _____ Signal Equipment Design/Application
- _____ Intelligent Transp System Technologies (ITS) Design
- _____ Utility Make-Ready Design

SIGNING & DELINEATIONS

- _____ Guide Sign Design – Conventional Roads
- _____ Guide Sign Design – Expressways & Freeways
- _____ Pavement Marking Plans

TRAFFIC ENGINEERING

- _____ Traffic Data Collection

CONGESTION MANAGEMENT

- _____ Traffic Impact Studies/Analyses
- _____ Independent review of Traffic Impact Studies/Analyses
- _____ Capacity Analyses (Interchanges)
- _____ Capacity Analyses (Freeways)
- _____ Capacity Analyses (Arterials)
- _____ Capacity Analyses (Intersections)
- _____ Capacity Analyses (Roundabouts)
- _____ Traffic Simulations using advanced modeling software
- _____ Corridor Studies
- _____ Interchange Modification/Justification Reports
- _____ School Traffic Operation Studies

WORK ZONE TRAFFIC CONTROL

- _____ Traffic Control Plans

Contact Person: Renee Roach, PE – 919/771-2741
rroach@ncdot.gov

**PROJECT PLANNING FOR HIGHWAY
PROJECTS**

- ☐ Categorical Exclusions
- ☐ Environmental Assessments/Finding of No
Significant Impacts
- ☐ Environmental Impact Statements

**HUMAN ENVIRONMENT UNIT
(HEU)**

- ☐ Public Involvement
- ☐ Community Impact Assessment
- ☐ Indirect & Cumulative Impacts Assessment
- ☐ Archaeological Resource Surveys
- ☐ Historic Architectural Surveys of Standing
Structures (Buildings & Bridges)
- ☐ Traffic Noise Analysis
- ☐ Air Quality Analysis
- ☐ Limited English Proficiency

NATURAL ENVIRONMENT UNIT (NEU)

- ☐ Threatened & Endangered Species Survey
& Studies
- ☐ Ecological & Biotic Community Studies
- ☐ Wetland and Stream Delineation
- ☐ Freshwater Mussel Surveys
(copies of permits & licenses must be attached)
- ☐ ICI Water Quality Assessments

(NEU) ON-SITE SERVICES

- ☐ Wetland, Stream, and Buffer Permitting
- ☐ Wetland Mitigation Site Planning
- ☐ Wetland Mitigation Site Design and
Construction Oversight
- ☐ Stream Biological Monitoring
- ☐ Stream Mitigation Site Plan
- ☐ Stream Mitigation Site Design and
Construction Oversight

Contact Person: Brenda Avant - (919) 707-6002
bpavant@ncdot.gov

- _____ Cartography
- _____ Field Data Collection
- _____ Data Conversion
- _____ Data Validation (QA/QC)
- _____ Remote Sensing Data acquisition and Processing

Contact Person: John Farley - 919/707-2151
jcfarley@ncdot.gov

Electrical & Mechanical Design for Moveable
Bridge Systems

Load Testing & Finite Analysis

NBIS Municipal Bridge Inspection

Contact Person: Michael Summers - 919/835-8277
msummers@ncdot.gov

Laboratory Services

_____ Thermoplastic
_____ Lead-in/Loop Cable
_____ Asphalt Materials – Binder & Emulsified
_____ Metal Alloys
_____ Paint Coating
_____ Hot Bitumen Adhesive
_____ Glass Beads
_____ Aggregate
_____ Soils Lab Tier I
_____ Soils Lab Tier II
_____ Soils Lab Tier III

Inspection Services

_____ Inspection of Prestressed Concrete
_____ Inspection of QC/QA Asphalt Technician
_____ Inspection of QC/QA Asphalt Laboratory
_____ Equipment
_____ Inspection of Structure Coating
_____ Inspection of Timber and Wood Products

Contact Person: Phil Stanberry - 919/733-7091
pstanberry@ncdot.gov

Pavement Management

- _____ Pavement Design
- _____ Pavement Condition Surveys
- _____ Pavement Analysis
- _____ Pavement Management Systems
- _____ Pavement Deflection Testing
 & Backcalculation
- _____ Skid Testing
- _____ Profilometer & Reporting
- _____ Ground Penetrating Radar
 & Analysis

High Speed Highway Data Collection

- _____ High Speed Data Collection and
 Processing
- _____ Quality Assurance for High Speed
 Data Collection

Contact Person:

Pavement Management:

Jerry Blackwelder, PE - 919/212-6050
jblackwelder@ncdot.gov

High Speed Highway Data Collection:

Neil Mastin, PE 919/212-6020
jmastin@ncdot.gov

SAFETY & HEALTH

Training

Indoor Air Quality

Hearing Conservation

Pulmonary Function

Industrial Hygiene Air Sampling (i.e., Silica, Lead)

Ergonomics

Safety & Health

Contact Person: Melinda Dudley – 919/250-4200 x253
mdudley@ncdot.gov

_____ Multimodal Transportation Planning
_____ Long Range Transportation Planning
_____ Travel Demand Model Development
_____ Travel Demand Model Application
_____ Air Quality Conformity
_____ Travel Survey

_____ Comprehensive Transportation
_____ Planning Development
_____ Project Level Traffic Forecasting
_____ Freight Forecasting
_____ Corridor Planning

Contact Person: Elena Talanker, PE - 919/707-0911
etalanker@ncdot.gov

_____ Erosion and Sediment Control Design
_____ Stream Restoration/Mitigation Monitoring
_____ Wetland Mitigation Monitoring

Contact Person: David B. Harris - 919/733-2920 x 64
davidharris@ncdot.gov

RAIL-HIGHWAY CROSSING

_____ Traffic Separation Studies and Crossing
Evaluation Studies

_____ Railroad Crossing Signal and Traffic
Engineering Services

RAIL ENGINEERING

_____ Industrial and Yard Track Design and
Layout

_____ Freight Main Track Design and Layout

_____ Intercity Passenger and HSR Track Design
and Layout

_____ Rail Transit Design and Plans Review

_____ Railroad Communications and Signal
System Design

_____ Review and Development of Railroad

_____ Engineering Drawings, Standards and
Specifications

_____ Rail Construction Project Inspection and
Management

_____ Rail Corridor Traffic Modeling and
Capacity

_____ Track Design and Layout

**OPERATIONS FACILITIES DESIGN
AND MANAGEMENT**

_____ Passenger Station Design

_____ Historic Passenger Station Renovations

_____ Passenger Platforms

_____ Construction Administration

_____ Maintenance Facility

_____ Rail Facilities

_____ Rail Sidings

_____ Landscape and Streetscape Design

_____ Rail Corridor Maintenance Assessments,
Surveys, and Lease Studies

PROJECT PLANNING

_____ Rail Functional and Preliminary Design

_____ Studies of Economic and Fiscal Impact of
Rail Related Activities

_____ Demand Modeling, Ridership, Revenue,
Operating Costs for Commuter and
Intercity Passenger Rail Operations

_____ Train Performance and Rail Line Capacity
Analysis

_____ Technical and Negotiation Assistance in
Securing Rail Lines or Corridors

Contact Persons:

Rail-Highway Crossing:

Greg Keel — 919/715-7892
gkeel@ncdot.gov

Rail Engineering:

Greg Keel — 919/715-7892
gkeel@ncdot.gov

Operations Facilities Design & Maint:

Michael Shumsky— 919/733-7245 ext 250
mshumsky@ncdot.gov

Project Planning:

Greg Keel — 919/715-7892
gkeel@ncdot.gov

PROJECT PLANNING

_____ Feasibility Studies

Contact Persons: Derrick W. Lewis, PE - 919/715-5572
 Dlewis@ncdot.gov

Quality Enhancement	Value Engineering
<input type="checkbox"/> Process Improvement & Reengineering	<input type="checkbox"/> Team Leader (PE/CVS)
<input type="checkbox"/> Environmental Management Systems	<input type="checkbox"/> Team Facilitator (CVS)
<input type="checkbox"/> Conflict/Dispute Resolution	<input type="checkbox"/> Partial VE Study Team: Roadway Design Engineer
<input type="checkbox"/> Community and Stakeholder Involvement	<input type="checkbox"/> Partial VE Study Team: Hydraulics Design Engineer
<input type="checkbox"/> General Meeting Facilitation	<input type="checkbox"/> Partial VE Study Team: Structure Design Engineer
<input type="checkbox"/> Facilitation Training	<input type="checkbox"/> Partial VE Study Team: Geotechnical Engineer
<input type="checkbox"/> Strategic Planning	<input type="checkbox"/> Partial VE Study Team: Traffic Operations Engineer
<input type="checkbox"/> Problem Solving Facilitation	<input type="checkbox"/> Partial VE Study Team: Project Estimator
<input type="checkbox"/> Consensus Building	<input type="checkbox"/> Partial VE Study Team: Roadway Construction Engineer
<input type="checkbox"/> Change Management	<input type="checkbox"/> Partial VE Study Team: Bridge Construction Engineer
<input type="checkbox"/> Procedure Development & Documentation	<input type="checkbox"/> Partial VE Study Team: Roadway Maintenance Engineer
<input type="checkbox"/> Other (specify) _____	<input type="checkbox"/> Partial VE Study Team: Bridge Maintenance Engineer
	<input type="checkbox"/> Entire VE Study Team
	<input type="checkbox"/> Constructability Expert
	<input type="checkbox"/> Complementary Service: Information Gathering
	<input type="checkbox"/> Complementary Service: Provide Facility for Team Studies
	<input type="checkbox"/> Complementary Service: Prepare VE Study Report
	<input type="checkbox"/> Complementary Service: Formal Presentation
	<input type="checkbox"/> Complementary Service: Development of Implementation
	<input type="checkbox"/> Plans
	<input type="checkbox"/> Procedure Development & Documentation
	<input type="checkbox"/> Value Engineering Training

Contact Person:

Odessa McGlown – 919/508-1761

omcglown@ncdot.gov

Utility Engineering

- _____ Public Water Distribution Systems
- _____ Public Water Transmission Systems
- _____ Sanitary Sewer Collection Systems
- _____ Sanitary Sewer Outfall Systems
- _____ Trenchless Technology

Utility Coordination

Contact Person:

Utility Engineering/:

Roger G. Worthington, Jr., PE - 919/250-4128
rworthington@ncdot.org

Utility Coordination:

O'Hara Parker - 919/250-4128
oparker@ncdot.gov

Right of Way

[illegible]

Contact Person: Neal Strickland - 919/733-7932 - Ext. 317
nstrickland@ncdot.gov

Division of Aviation

<input type="checkbox"/> Airport System Planning	<input type="checkbox"/> Aviation Research and Development
<input type="checkbox"/> Airport Design/Engineering/Construction	<input type="checkbox"/> Avionics System Development
<input type="checkbox"/> Airfield Pavement Management	<input type="checkbox"/> Airspace Procedure Development
<input type="checkbox"/> Commercial Air Service Studies	<input type="checkbox"/> Aviation Safety/Education/History
<input type="checkbox"/> Aviation Economic Impact	<input type="checkbox"/> Flight Operations/Training
<input type="checkbox"/> NAVAID Development/Maintenance	<input type="checkbox"/> FAA Safety Data Program
<input type="checkbox"/> Air Service Development	<input type="checkbox"/> Other:
<input type="checkbox"/> Air Cargo Studies	<input type="checkbox"/>
<input type="checkbox"/> Flight Ops Mgmt.	<input type="checkbox"/>
<input type="checkbox"/> Executive Pilots (Captains & F.O.)	
<input type="checkbox"/> Aircraft Maintenance	

Contact Person: Rick W. Barkes - 919/840-0112 ext. 227
rbarkes@ncdot.gov

- _____ Municipal & Regional Planning Studies
- _____ Multi-use trail design, survey & layout
- _____ Bicycle map preparation
- _____ Landscape & streetscape design

Contact Person: Robert Hayes - 919/807-0776
 rrhayes@ncdot.gov

Operations & Maintenance

General O&M Knowledge

- Analysis of long term durability
- O&M comparative cost analysis

Level 1 – Preliminary O&M Plan

Includes:

- Existing data collection and review
- Develop O&M management structure & organization
- Develop O&M requirements
- Preliminary O&M plan
- Preliminary OPEX
- Preliminary CAPEX

Level 2 – Final O&M Plan

Includes:

- Operations manual
- Maintenance manual
- Quality management system plan
- Safety, emergency & inspection plans
- Final OPEX & CAPEX

Level 3 – Investment Grade O&M Services

Includes:

- Due diligence report
- Bond rating agency representation
- Preparation of agreement between lenders and O&M provides
- Sensitivity testing for conditions external to project
- Revenue forecast certification
- Bond rating agency representation

Other O&M Services:

Waste Management

General Solid Waste Management Services

Construction Waste Consulting

Demolition Debris Recycling Consulting

Other Waste Management Services:

General Toll Knowledge

Infrastructure/Interface & Coordination

Toll System Planning & Design

Toll Standards Development

Toll System RFP Development

Toll Operation Marketing Strategy

Toll Collection Facilities & Equipment

Other Toll Services

Traffic and Revenue Forecasts

HOT lane studies

Contact Person:

Leslie Schuck – 919/788-7153
klischuck@ncdot.gov

PHOTOGRAMMETRY

- _____ Photoqrammetric Services
(sample must include an Orthophoto in both TIF &
SID formats, the associated world files, a DGN file,
equipment and software list)
- _____ Aerial Imagery Services
(sample must include equipment list)

Contact Person: Rob Allen - 919/250-4167
roballen@ncdot.gov

ARCHITECTURE

_____ Building Design
_____ Building Construction Administration
_____ Advance Planning
_____ Programming Studies
_____ Roof Design
_____ Estimating

SITE CIVIL ENGINEERING

_____ Building Site Design

LEAD PAINT

_____ Lead Paint Testing
_____ Lead Paint Abatement

MOLD

_____ Mold Testing
_____ Mold Remediation

ASBESTOS

_____ Asbestos Surveys
_____ Asbestos Abatement
_____ Asbestos Awareness Training

PLUMBING, MECHANICAL & ELECTRICAL ENGINEERING

_____ Plumbing Design
_____ Mechanical Systems Design
_____ Commissioning
_____ Life Cycle Cost Analysis
_____ Building Envelope Design
_____ Electrical Engineering Design
_____ Lighting Control Design
_____ Fire Protection/Fire Alarm System Design
_____ HVAC
_____ Geothermal Design
_____ Energy Modeling

STRUCTURAL ENGINEERING

_____ Building Structural Design
_____ Building Foundation Design
_____ Special Inspections

SITE SURVEYING

_____ Topographic Surveying
_____ Boundary Surveying
_____ Easement Surveying

Contact Person: Shohreh Katoozian — 919/715-0404
skatoozian@ncdot.gov

DISASTER MONITORING

- _____ FEMA Compliance Monitoring & Auditing* * denotes required discipline
- _____ Disaster Recovery Planning*
- _____ Debris Removal Monitoring*
- _____ Disaster Recovery Data & Accounting*
- _____ Truck Verification/Certification*
- _____ Load Ticket Certification*

Contact Person: Don Aschbrenner - 919/733-3725
 daschbrenner@ncdot.gov

Public Transportation Division

Transit Planning Services

- _____ Economic/Fiscal Impact, Cost-Benefit Analysis, Financing Alternatives
- _____ Public-Private Venture Organizational Alternatives
- _____ Demand Modeling, Ridership, Revenue, Cost and Profitability Analysis
- _____ Community Transportation Service Plans
- _____ Transit System Consolidation Studies
- _____ Transit Facility Feasibility Studies for Transit Support Structures
- _____ Transit Support Feasibility and Implementation Studies
- _____ Other Special Transit Studies

Transit System Compliance

- _____ Conduct Compliance Reviews for Transit System

Transit System Analysis

- _____ Route and Schedule Analysis for Urban Bus Systems
- _____ Transit Service Productivity Review and Analysis

Transit System Capacity

- _____ Organizational, Operational and Administrative Assessments
- _____ Conduct Local and Statewide Needs Assessments

Transit System Technical Assistance

- _____ Statewide Circuit Rider Technical Assistance Program for Transit Systems

Transit System Grant Administration

- _____ Transit Grant Program Administration
- _____ Transit Program Funding Formula Allocation Analysis
- _____ State Management Plan Development
- _____ Program System Analysis
- _____ Program Funding Sustainability
- _____ Vehicle Specification Preparation and Analysis

Contact Person: David Bender - 919/733-4713 ext. 237
dpbender@ncdot.gov